

AMENDMENTS TO THE CLAIMS

1. (Original) A method for network communications, the method comprising:
 establishing a first connection between a client and a first protocol service using a first protocol; and
 communicating between the client and the first protocol service via a plurality of secondary protocols encapsulated within the first protocol,
 wherein at least one of the secondary protocols comprises a plurality of virtual channels.
2. (Original) The method of claim 1 further comprising:
 establishing a second connection between the first protocol service and a host service using one of the secondary protocols; and
 communicating between the first protocol service and the host service via one of the secondary protocols.
3. (Original) The method of claim 1 further comprising:
 establishing a plurality of second connections between the first protocol service and a plurality of host services using the plurality of secondary protocols, each of the plurality of second connections being established between the first protocol service and a different host service, and each of the plurality of second connections being established using one of the plurality of secondary protocols; and
 communicating between the first protocol service and the plurality of host services over each of the plurality of second connections via one of the plurality of secondary protocols.
4. (Original) The method of claim 1 wherein establishing the first connection between the client and the first protocol service comprises establishing the first connection through an intermediary node.
5. (Original) The method of claim 1 wherein the first protocol is communicated over TCP/IP.
6. (Original) The method of claim 1 wherein each virtual channel comprises a plurality of protocol packets enabling remote access functionality.
7. (Original) The method of claim 1 further comprising compressing the communications at the level of the first protocol.
8. (Original) The method of claim 1 further comprising encrypting the communications at the level of the first protocol.

9. (Original) The method of claim 1 wherein the first connection is secure and further comprising:

- establishing a second connection between the first protocol service and a first host service;

- communicating between the client and the first host service via the first connection and the second connection;

- interrupting the second connection;

- establishing a third connection between the first protocol service and a second host service without interrupting the first connection; and

- communicating between the client and the second host service via the first connection and the third connection.

10. (Original) The method of claim 1 wherein one of the secondary protocols are selected from the set of protocols consisting of HTTP, RDP, 1C A, FTP, Oscar, and Telnet.

11. (Original) A method for providing a client with a reliable connection to a host service, the method comprising:

- establishing a first connection between the client and a first protocol service using a first protocol, the first protocol for encapsulating a plurality of secondary protocols;

- establishing a second connection between the first protocol service and the host service using one of the plurality of secondary protocols;

- maintaining a queue of data packets most recently transmitted via the first connection on at least one of the client and the first protocol service; and

- upon failure of the first connection:

- maintaining the second connection;

- continuing to maintain the queue of data packets most recently transmitted via the first connection; and

- establishing a third connection between the client and the first protocol service using the first protocol.

12. (Original) The method of claim 11 further comprising transmitting at least one of the queued data packets via the third connection.

13 - 45. (Cancelled)

46. (Original) A system for network communications, the system comprising:

a first protocol service configured to accept a first connection with a client and communicate with the client via a plurality of secondary protocols encapsulated within a first protocol, wherein at least one of the secondary protocols comprises a plurality of virtual channels.

47. (Original) The system of claim 46 wherein the first protocol service is further configured to establish a second connection with a host service and communicate with the host service via one of the secondary protocols.

48. (Original) The system of claim 46 wherein the first protocol service is further configured to establish a plurality of second connections with a plurality of host services using the plurality of secondary protocols, each of the plurality of second connections being established with a different host service and each of the plurality of second connections being established using one of the plurality of secondary protocols, and wherein the first protocol service is further configured to communicate with the plurality of host services over each of the plurality of second connections via one of the plurality of secondary protocols.

49. (Original) The method of claim 46 wherein the first connection with the client is routed through an intermediary node.

50. (Original) The system of claim 46 wherein the first protocol is communicated over TCP/IP.

51. (Original) The system of claim 46 wherein each virtual channel comprises a plurality of protocol packets enabling remote access functionality.

52. (Original) The system of claim 46 wherein the first protocol service is further configured to compress the communications at the level of the first protocol.

53. (Original) The system of claim 46 wherein the first protocol service is further configured to encrypt the communications at the level of the first protocol.

54. (Original) The system of claim 46 wherein the first connection is secure and the first protocol service is further configured to establish a second connection with a first host service, interrupt the second connection, and establish a third connection with a second host service without interrupting the first connection.

55. (Original) The system of claim 46 wherein one of the secondary protocols are selected from the set of protocols consisting of HTTP, RDP, IC A, FTP, Oscar, and Telnet.

56. (Original) A system for providing a client with a reliable connection to a host service, the system comprising:

a first protocol service configured to accept a first connection with the client, establish a second connection with the host service, and, upon failure of the first connection: maintain the second connection and accept a third connection from the client; and

the host service configured to accept the second connection with the first protocol service and, upon failure of the first connection: maintain the second connection,

wherein the first connection and the third connection are each established using a first protocol, the first protocol for encapsulating a plurality of secondary protocols, and wherein at least one of the client and the first protocol service is further configured to maintain, before and upon failure of the first connection, a queue of data packets most recently transmitted via the first connection.

57. (Original) The system of claim 56 wherein the client is further configured to transmit at least one of the queued data packets via the third connection.

58. (Original) The system of claim 56 wherein the first protocol service is further configured to transmit at least one of the queued data packets via the third connection.

59 - 91. (Cancelled)